

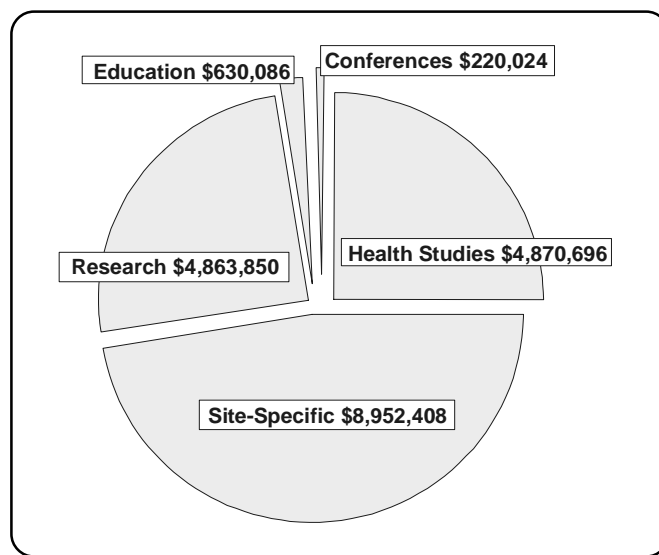


Activities in California

ATSDR in Partnership with California

The Agency for Toxic Substances and Disease Registry (ATSDR) is the lead public health agency responsible for implementing the health-related provisions of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). ATSDR is an Atlanta-based federal agency with more than 400 employees and an annual budget for 2002 of \$78 million. ATSDR is responsible for assessing the presence and nature of health hazards at specific Superfund sites, helping to prevent or reduce further exposure and illnesses that result, and expanding the knowledge base about the health effects of exposure to hazardous substances.

ATSDR works closely with state agencies to carry out its mission of preventing exposure to contaminants at hazardous waste sites and preventing adverse health effects. ATSDR provides funding and technical assistance for states to identify and evaluate environmental health threats to communities. These resources enable state and local health departments to further investigate environmental health concerns and educate communities. This is accomplished through cooperative agreements and grants. At this time, ATSDR has cooperative agreements or grants with 31 states, 1 American Indian nation (Gila River Indian Community), and 1 commonwealth (Puerto Rico Department of Health). From **1988 through 2001**, ATSDR awarded more than **\$19,537,064** in direct funds and services to the state of **California**. In addition to direct funds and services, ATSDR provides technical and administrative guidance for state-conducted site activities.



ATSDR Site-Specific Activities

Public Health Assessment-Related Activities

One of the agency's important mandates is to conduct **public health assessments** of all National Priorities List (NPL) sites and of other sites where there might be a significant threat to the public health. In **California** there have been **116** sites designated to the NPL.

A **public health assessment** provides a written, comprehensive evaluation of available data and information on the release of hazardous substances into the environment in a specific geographic area. Such releases are assessed for current or future impact on public health. ATSDR, in conjunction with public health and environmental officials from **California**, has conducted **146** health assessments in the state. Following is an example of a health assessment conducted in the state.

Pacific Gas and Electric - This site received national attention with the release of the movie "**Erin Brockovich**," which was based on activities associated with the site. Pacific Gas and Electric, located in Hinkley, dumped wastewater that contaminated private well water with hexavalent chromium. The highly publicized lawsuit and large settlement in favor of the plaintiffs heightened concerns of Hinkley residents about their health.

ATSDR funded a cooperative agreement to the **California Department of Health Services (CDHS)** to help residents and former residents understand the complex issues of chromium exposure and the related health effects, and assist in sorting out the conflicting health messages the community received from lawyers, the media, and regulatory agencies.

The assessment recommended strong regulatory oversight of clean-up efforts, air monitoring at the groundwater treatment system, and testing of additional private wells. Air sampling conducted at the site determined that the selected treatment resulted in the release of unsafe hexavalent chromium levels into the air, and the irrigation portion of the treatment system was shut down until the data are fully evaluated. CDHS continues to work with the community and with other agencies involved at the site. The public health assessment was published in December 2000.

A **health consultation** is a written or oral response from ATSDR to a specific request for information about health risks related to a specific site, chemical release, or hazardous material. It is a more limited response than a public health assessment. To date, **122** documented health consultations have been conducted at **56** sites in **California**. Following is an example of a health consultation conducted in the state.

West College Groundwater Contamination - In September 2000, the **North Coast Regional Water Quality Control Board (WQCB)** requested that CDHS evaluate public health concerns in a community near Santa Rosa, Sonoma County. CDHS determined that private wells contained perchloroethylene (PCE) and immediate action was needed to prevent consumption of contaminated water. As a result of the health consultation written by CDHS and issued through ATSDR, the WQCB directed resources to install wellhead treatment systems on contaminated wells. CDHS also provided health education and consultation to individuals in the community who were concerned about their health. CDHS continues to provide technical support to the Sonoma County Health Department.

Educating Health Professionals and Community Activities

Another aspect of the cooperative agreement program includes the support of educational activities for physicians and other health professionals and communities concerning human exposure to hazardous substances in the environment. **California** has participated in this program since 1989. Following are examples of this type of activity conducted in the state.

Indian Health Council (IHC) - The IHC is a consortium of nine tribes in San Diego. ATSDR and IHC are currently in the second year of a 5-year cooperative agreement program to strengthen IHC's capacity to develop, implement, and evaluate environmental health education and promotion activities. Of particular interest is IHC's "Breathe Easy" pediatrics asthma prevention and control project. Future activities will include: conducting community-level assessments; conducting home visits and individual interventions; testing and modifying previously developed materials; and evaluating current strategies and activities, and determining the possibility of program replication in other tribal communities.

Pediatric Environmental Health Specialty Units Program - In 1998, ATSDR developed the Pediatric Environmental Health Specialty Unit (PEHSU) Program with the Association of Occupational and Environmental Clinics (AOEC). The program was developed as a national resource for pediatricians, other health care providers, federal staff, and the public to: (1) reduce environmental health threats to children, (2) improve access to expertise in pediatric environmental medicine, and (3) strengthen public health prevention capacity. The key focus areas of the PEHSUs are medical education and training, telephone consultation, and clinical specialty referral for children who may have been exposed to environmental hazards. Eleven of these units are operating in the United States.

The California PEHSUs were established in 2000; they are located at the **University of California-San Francisco** and the **University of California-Irvine**. The objectives for these units are to: provide consultative services to state and local health professionals, conduct educational activities, provide clinical and diagnostic services, and coordinate program evaluation activities.

World Congress on Environmental Health - ATSDR awards funds to support a program of the California Environmental Health Association (CEHA), comprised of eight regional private sector chapters and members, and city, county, state and tribal organizations, in collaboration with the National Environmental Health Association. This program provides for the evaluation, planning, design and implementation of environmental health education programs that respond to the significant threat of chemical terrorism. Annually, the CEHA conducts an Educational Symposium for members and in May 2002 hosted the 7th World Congress on Environmental Health in San Diego. An ATSDR, Division of Health Education and Promotion, physician, Dr. Erik Auf Der Heide, addressed the Congress concerning agents associated with chemical warfare/terrorism.

Public Health Conference Support

To encourage information sharing, technical discussion, and other training activities related to acute illness and chronic disease in persons exposed to hazardous substances, ATSDR awards grants to state and local agencies to support public health conferences. Since 1988, **six** conferences have been supported.

Health Studies

Health studies are conducted to determine the relationship between exposure to hazardous substances and adverse health effects. Health studies also define health problems that require additional investigation through, for example, a health surveillance or epidemiologic study. Following are examples of health studies that ATSDR has conducted or supported in **California**.

Neural Tube, Heart, and Oral Cleft Defects - In 1992, ATSDR awarded a grant to the **California March of Dimes Birth Defects Foundation** representing CDHS, to determine whether women living near an NPL site during the periconceptional period have an increased risk of having children with selected congenital malformations. The study found that approximately 15% of the mothers had resided during early pregnancy in a census tract containing a waste site. More mothers of children born with a conotruncal heart defect or cleft defect resided near a waste site than did mothers of children born without such a birth defect. The final report was published in July 1996.

McClellan Air Force Base - The mission of McClellan AFB includes a variety of activities that previously involved the use, storage, and disposal of hazardous material. This study was conducted to determine whether people living near McClellan AFB had significantly elevated prevalence of self-reported symptoms and diseases and abnormal biomedical tests for the hepatobiliary, immune, and renal systems when compared with a reference population. It identified 37 residents (17 households) in the target area who reported using private well water and who might be at risk of contamination. An increased prevalence of self-reported symptoms was detected in the target area compared with the comparison area. Only 2 of 19 illnesses in the target area had significantly higher odds ratios: bowel disease or intestinal problems and ulcers or other stomach disease. After controlling for potential confounders, an increased prevalence was found for headaches, nerve tingling or numbness, trouble remembering, and ulcers or other stomach disease, in the target area. The final report was published in January 1996.

Chrome Crankshaft/Suva Schools - A respiratory health study is being conducted currently at the Chrome Crankshaft/Suva Schools site where the plating facility released chromium from a smokestack. The released chromium passed over nearby schoolyards in Bell Gardens where children played. Bell Gardens is a Hispanic township of Los Angeles. Through an ATSDR cooperative agreement, CDHS became involved at this site at the request of EPA's Environmental Justice Coordinator, the California Department of Toxic Substances Control, and the Los Angeles County Health Department. In addition to the respiratory health study, CDHS completed a public health assessment addressing drinking water safety, and conducted air modeling and a public health assessment evaluating the results of the air monitoring. CDHS also convened an advisory group of parents and school representatives to foster communications between concerned parents and school leaders.

Del Amo/Montrose Chemical- CHDS has been involved in public health activities at this site and in the neighboring community for nearly a decade. The **University of California at Irvine (UCI)** is conducting a community health investigation to assess the current health status of residents living near these sites, and to implement public health interventions and preventive public health actions. UCI is conducting this activity with financial and technical support from ATSDR, and in collaboration with CDHS and the **University of California at Los Angeles**.

Substance-Specific Applied Research

Minority Health Professions Foundation Research Program - In 1992, \$8 million was appropriated to ATSDR for the development of a research program in cooperation with the **Association of Minority Health Professions Schools (AMHPS)**. To implement this congressionally mandated research program, ATSDR entered into a cooperative agreement with the Minority Health Professions Foundation (MHPF), the management organization for AMHPS. One of the AMHPS institutions participating in this research is the Martin Luther King, Jr./Charles R. Drew University of Medicine & Science (MLK/Drew) in Los Angeles, where the following investigation is being conducted.

Lead and Blood Pressure During Pregnancy - Disadvantaged minorities in large urban areas generally have higher blood-lead levels than national averages. Previous data show a relationship between higher blood-lead levels and higher blood pressure; some ethnic groups, who may also live within the inner-city, suffer from disproportionately high rates of hypertension. This project examines the possible role of lead in elevating blood pressure during pregnancy in Hispanic (84% study population) and African-American women by examining their lead body burden and blood pressure after delivery, between pregnancies, and during a subsequent pregnancy.

Findings to date indicate that blood-lead levels in pregnant immigrants were significantly higher than in non-immigrants, but declined with increased residence time in the United States. Blood pressure in pregnant immigrants correlated with blood-lead levels in Hispanic and African-American women; maternal bone lead, which indicated past exposure, influenced blood-lead levels and by correlation, blood pressure.

These investigators have now demonstrated that bone-lead levels are directly correlated with the development of elevated blood pressure as well as hypertension during pregnancy in their study participants, irrespective of their immigration status or ethnicity (immigrants and non-immigrants, Hispanic and African-American).

Genetic Toxicity of Methyl Tertiary Butyl Ether - This was a substance-specific research project supported by ATSDR which involved methyl tertiary butyl ether (MTBE). MTBE is a synthetic chemical that was introduced as an additive for unleaded gasoline in the 1980s in cities where there were concerns about pollutants such as carbon monoxide. ATSDR funded the **University of California at Davis** to assess the genotoxic activity of MTBE in two short-term test systems that used bacteria and mice. Their data showed that MTBE does not exhibit genotoxicity over a wide range of doses in either the bacterial or animal test systems.

Toxicological Profiles

ATSDR develops toxicological profiles that describe health effects, environmental characteristics, and other information for substances found at NPL sites. These profiles contain information on pathways of human exposure and the behavior of hazardous substances in environmental media such as air, soil, and water. In the past 5 years, approximately **4,764** of these profiles have been sent to requesters, including representatives of federal, state, and local health and environmental departments; academic institutions; private industries; and nonprofit organizations, in **California**.

If you would like additional information, contact ATSDR toll-free at (888) 42ATSDR, that is, (888) 422-8737 or visit the homepage at <http://www.atsdr.cdc.gov>
